

REMARKS/ARGUMENTS

By this Amendment, claims 21 and 38 are amended, and claims 22-23 (whose limitations have been incorporated into claim 21) and 41 are canceled. Claims 21 and 24-40 are pending.

Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks.

Information Disclosure Statement

An Information Disclosure Statement is being submitted along with this Amendment to make of record WO 2005/010499 A2 and its English-language counterpart, US 2006/0156753 A1. Record consideration is respectfully requested.

Claim Objection

The objection to claim 22 is obviated by its cancellation. The limitations of claim 22, with the correction suggested by the Examiner, are incorporated into claim 21. Accordingly, reconsideration and withdrawal of the objection to claim 22 are respectfully requested.

Rejection of Claim 38 as Being Indefinite

The rejection of claim 38 as being indefinite under 35 U.S.C. § 112, second paragraph, is obviated by the amendment thereof. Claim 38 now specifies that the temperature sensor is arranged in the cooling space so as to measure a temperature of a cryosample in the cooling space. Support for the amendment is apparent in the original disclosure at, e.g., page 6, lines 21-25 and page 7, lines 16-19.

Accordingly, reconsideration and withdrawal of the indefiniteness rejection of claim 38 are respectfully requested.

Rejections of Claim 41

The rejections of claim 41 under 35 U.S.C. §§ 101 and 112 are obviated by its cancellation. Accordingly, reconsideration and withdrawal of the rejections of claim 41 are respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 21, 24, 35 and 40 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 3,595,030 (Roslonski) in view of U.S. Patent No. 6,044,648 (Rode). Claims 22-23, 25-34, 36-37 and 39 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Roslonski in view of Rode, further in view of U.S. Patent No. 4,481,779

(Barthel), or U.S. Patent No. 3,618,336 (Palma), or U.S. Patent No. 5,601,143 (Binder), or U.S. Patent No. 5,976,871 (Walker et al.), or U.S. Patent No. 6,845,628 (Weng), or Weng further in view of U.S. Patent No. 5,546,756 (Ali). These rejections are respectfully traversed.

At the outset, Applicants note that base claim 1 has been amended to largely correspond with patented claim 1 of counterpart EP 1 768 782 B1 (attached). In particular, the limitations of claims 22 and 23 have been incorporated into base claim 1. While Applicants understand that the Examiner is not obliged to accept the opinions of other patent offices, it is worth noting that the PTO's Patent Prosecution Highway program does expedite the grant of U.S. patents based on favorable EPO prosecution under certain circumstances.

The claims now specify cooling equipment wherein: (a) **the cooling agent supply line** empties into the intermediate space between the inner wall and the outer wall and **introduces the cooling agent into the porous buffer material of the intermediate space**, (b) the **porous buffer material is adapted to** temporarily receive the cooling agent and continuously **transfer the cooling agent into the cooling space** through the inner wall, and (c) the inner wall is permeable for the cooling agent.

The Office Action at page 5, lines 4-5, acknowledges that Roslonski fails to disclose a cooling apparatus wherein the cooling agent supply line empties into the intermediate space. However, there is at least one additional deficiency of Roslonski that is not identified in the Office Action.

Roslonski discloses a cooling apparatus in which the cooling agent **exits** the cooling space ("inner compartment 22") through holes 36 into the intermediate space ("outer compartment 32"). See Roslonski at Fig. 2 and column 2, lines 53-65. In other words, the **direction of the flow of the cooling agent is** from the cooling space **into the insulating material of the intermediate space**, which is the opposite of what is claimed by Applicants.

The Office Action cites Rode in an effort to remedy the acknowledged failure of Roslonski to disclose a cooling agent supply line emptying into the intermediate space. However, the teachings of Rode do not properly combine with the teachings of Roslonski to suggest cooling equipment in which the cooling agent supply line is adapted to introduce the cooling agent into the porous buffer material in the intermediate space, and the porous buffer

material is adapted to continuously transfer the cooling agent into the cooling space from the intermediate space.

Fig. 1 of Rode discloses a cooling apparatus in which fan 26 circulates a cooling agent emitted from cooling agent supply line (tube 28) into the cooling space (chamber 14) and back into the intermediate space (plenums 20, 22, 24). Fig. 3 of Rode discloses an alternative embodiment in which fan 54 circulates a cooling agent emitted from a cooling agent supply line (tube 66) through the intermediate space (plenums 56, 58, 60) and into the cooling space (chamber 50).

Improper Combination of Incompatible Teachings

A person having ordinary skill in the art (a “PHOSITA”) would not have been motivated to incorporate the cooling agent supply line of Rode into the cooling apparatus of Roslonski with a reasonable expectation of success. Feeding the cooling agent from a supply line into outer compartment 32 of Roslonski rather than through perforated coil 14 would have been expected to slow the cooling of bottle 17 within coils 14. This is completely contrary to the goal of Roslonski, which is to rapidly cool a liquid in a bottle by providing a cooling device comprising perforated tubing adapted to axially surround a bottle as a coil and emit a flow of cooling agent from the perforations “radially inwardly of the coil against the bottle to cool the liquid contained therein.” See Roslonski at column 1, lines 35-56. A PHOSITA would have expected the proposed modification to the teachings of Roslonski to result in a device ineffective for rapidly cooling liquid in a bottle. As noted in *McGinley v. Franklin Sports Inc.*, 60 USPQ2D 1001, 1010 (Fed. Cir. 2001):

If references taken in combination would produce a “seemingly inoperative device,” we have held that such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness. *In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969) (references teach away from combination if combination produces seemingly inoperative device); see also *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (inoperable modification teaches away).

Proposed Combination Does Not Meet All Claimed Features

The flow of cooling agent in the modified version of Roslonski’s device would remain as shown in Fig. 2, such that the cooling agent in outer compartment 32 would flow away from inner compartment 32 and toward holes 50, 52 through which the cooling agent is exhausted to

the atmosphere. See column 3, lines 13-20. Thus, the modified device proposed in the Office Action would not have Applicants' claimed porous buffer material in the intermediate space adapted to temporarily receive the cooling agent and continuously transfer the cooling agent into the cooling space through the inner wall.

None of the additional reference teachings can be properly combined to remedy the aforementioned deficiencies of Roslonski and/or Rode, and therefore the claimed invention is not obvious in view of the cited art.

It should further be noted that Barthel merely discloses a cryogenic storage container without disclosing a cooling agent supply line. The cryogenic storage container must be sealed in order to keep the container vacuum tight. Therefore, a PHOSITA would not have been motivated with a reasonable expectation of success to add a cooling agent supply line to the disclosure of Barthel.

Accordingly, reconsideration and withdrawal of the obviousness rejections are respectfully requested.


For at least the reasons set forth above, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully requested.

Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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